

Section 1.7

Part 3

1)

$$\frac{\sqrt{3}}{\sqrt{2}+\sqrt{3}} \cdot \frac{\sqrt{2}-\sqrt{3}}{\sqrt{2}-\sqrt{3}} = \frac{\sqrt{6}-3}{2-3} = \frac{\sqrt{6}-3}{-1} = -\sqrt{6}+3$$

$$3-\sqrt{6}$$

$$(\sqrt{2}+\sqrt{3})(\sqrt{2}-\sqrt{3})$$

$$\cancel{2-\sqrt{6}+\sqrt{6}-3}$$

$$-1$$

$$\frac{\cancel{\sqrt{6}-3}}{\cancel{2-3}}$$

$$\frac{55}{5} = \frac{\cancel{5} \cdot 11}{\cancel{5}} = 11$$

$$\frac{55}{5} = \frac{50 + \cancel{5}}{\cancel{5}} \neq 50$$

$$\frac{55}{5} = \frac{50}{5} + \frac{5}{5} = 10 + 1 = 11$$

2)

$$\frac{\sqrt{2}-2}{4\sqrt{2}-3\sqrt{3}} \cdot \frac{4\sqrt{2}+3\sqrt{3}}{4\sqrt{2}+3\sqrt{3}} = \frac{8+3\sqrt{6}-8\sqrt{2}-6\sqrt{3}}{32-27}$$
$$= \frac{8+3\sqrt{6}-8\sqrt{2}-6\sqrt{3}}{5}$$

3)

$$\frac{2x}{3 + \sqrt{x+y}} \cdot \frac{3 - \sqrt{x+y}}{3 - \sqrt{x+y}} = \frac{6x - 2x\sqrt{x+y}}{9 - (x+y)} = \frac{6x - 2x\sqrt{x+y}}{9 - x - y}$$

Homework:

Day 3 homework